APRIL/MAY 2024

23PECH24A — BIO-INORGANIC CHEMISTRY

Shanmuga Industries Arts & Science College T.V.Malai

Time : Three hours Maximum : 75 marks

SECTION A — (10 × 2 = 20 marks)

Answer ALL questions.

1. Draw the structure of the carboxypeptidase and its function.
2. What is B12 role and function?
3. Mention the biological process of hemoglobin.
4. Give the difference between ferredoxin and rubredoxin.
5. Define dinitrogen complexes.
6. Write a short note on chlorophyll.
7. List the symptoms of mercury poisoning in our body.
8. What are platinum-based anti-cancer drugs?
9. Show the optimum pH and temperature for enzymes.
10. Recall the properties of enzymes.

SECTION B — (5 × 5 = 25 marks)

Answer ALL questions.

11. (a) Discuss the role of the carbonic anhydrase? What is the role of carbonic anhydrase in digestion?

Or

(b) Explain sidorphores.

12. (a) (i) Compare Hb with Mb.

(ii) Outline the binding mechanism of haemoglobin.

Or

(b) Write a note on Bohr Effect.

13. (a) Answer in detail about photosystem-I.

Or

(b) Classify the types of nitrogen fixing. Explain.

14. (a) Describe in detail about the Gadolinium MRI imaging agents.

Or

(b) Give a notes on metal toxicity of Zn, Pb and As.

15. (a) Interpret the Michelis - Menton equation.

Or

(b) Analyse the nomenclature and classification of enzyme.

SECTION C — (3 × 10 = 30 marks)

Answer any THREE questions.

16. (a) Discuss the sodium and potassium transport.

(b) Explain about Vitamin B_{12}.

17. (a) Conclude the classification of cytochrome.

(b) Elaborate the structure and classification of ferridoxin.

18. (a) Build the function of photosynthesis.

(b) Catagorize the structure and function of chlorophyll.

19. (a) Analyze Chelation therapy.

(b) Develop the technetium Imaging Agents.

20. (a) Construct about the Enzyme kinetics.

(b) Compile the factors contributing to the efficiency of enzyme.

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